

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing Of Claims:

1.-7. (Canceled)

8. (New) An interferometric measuring system for measuring a shape deviation, position, surface properties, and vibrations of an object, comprising:
- a transmitting element including:
 - a modulation interferometer, and
 - a radiation source for short-coherent radiation;
 - a measuring probe system connected to the transmitting element and for supplying the radiation via a common optical path;
 - a receiving element for analyzing a measuring radiation returning from the measuring probe system, the receiving element being combined with the transmitting element in a transmitter/receiver unit, wherein:
 - the measuring probe system includes a plurality of measuring probes coupled to the common optical path via respective optical paths; and
 - a switching device disposed at a coupling point between the common optical path and the respective optical paths to the measuring probes, wherein:
 - the switching device allowing the different measuring probes to be individually brought into a bidirectionally transmitting connection with the transmitter/receiver unit for the radiation supplied by the modulation interferometer, on the one hand, and the measuring radiation, on the other hand.
9. (New) The system as recited in Claim 8, wherein at least one of the common optical path and the respective optical paths include monomode optical fibers.
10. (new) The system as recited in Claim 8, wherein the switching device has manually or automatically switchable control elements.
11. (New) The system as recited in Claim 10, wherein electrically, pneumatically, hydraulically, or magnetically operated actuating elements are provided for switching.

12. (New) The system as recited in Claim 8, wherein the switching device is controlled via a control device to which is also connected the transmitter/receiver unit for correlating the results to the respective measuring probes and for separate evaluations.
13. (new) The system as recited in Claim 8, wherein the measuring probes are individually assigned or assignable to a surface to be measured, form individual measurement channels of a probe unit, are arranged in groups in one or a plurality of measuring stations, are arranged in a higher-level interconnected system of measuring devices, or integrated into a combination of such arrangements.